

# ***FARADAY ROTATOR, OPTICAL ISOLATOR, POLARIZER , AND DIAMOND-LIKE CARBON THIN FILM***

## **Abstract of Disclosure**

New material useful in miniature, low-cost Faraday rotators, polarizers (analyzers) and magnetic substances; in Faraday rotators and optical isolators that can handle a plurality of wavelengths; and in miniaturizing, and reducing the cost and enhancing the performance of, optical isolators and various optical devices. Optical isolator (60b) as one example is configured by rectilinearly arranging a wavelength-selective Faraday rotator (30), a polarizer (20) and an analyzers (40) formed from a DLC thin film, and a magnetic substance (50) that is transparent to light. Integrally forming these using thin-film lamination technology simplifies the fabrication procedure to enable manufacturing miniature, low-cost optical isolators.